

Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended) A system for unifying data relating to an industry having a plurality of industry business context dimensions which define logical groupings of data related to the industry, the system comprising:

a plurality of data sources, at least ~~one~~two data sources having a physical or logical structure differing from at least one other data source, each data source having data which is capable of a logical contextual grouping into at least one data source specific dimension which contains data related to at least one industry business context dimension, and each data source having a data access mechanism for facilitating querying thereof, wherein each dimension has at least one dimension instance and each of the at least two data sources have data relating to a dimension instance;

a database having a first and a second plurality of nodes, each of the first plurality of nodes representing an industry business context dimension, each of the second plurality of nodes representing a data source specific dimension of at least one of the data sources, each of the first plurality of nodes related to at least one other of the first plurality of nodes, and each of the second plurality of nodes related to at least one of the first plurality of nodes; ~~and~~

a plurality of data source query function calls, each query function call querying a single data source regarding a single data source specific dimension, and each query function call using the data access mechanism of the single data source to facilitate access to the single data source; and

a complex query comprising a plurality of data source query function calls, the complex query querying the at least two data sources for data relating to the dimension instance, the complex query calling the plurality of data source query function calls to perform the querying of the at least two data sources for the data relating to the dimension instance, and wherein the data relating to the dimension instance is retrieved from each of the at least two data sources.

2. (Canceled)

3. (Original) The system of claim 1 wherein each dimension has at least one dimension instance, the system further comprising:

at least one result set object populated by data returned from a query from a user, wherein the query from the user includes selection of at least one dimension instance and at least one query function call without identification by the user of which data source to query.

4. (Original) The system of claim 1, further comprising:

at least one complex query calling a plurality of query function calls to query the plurality of data sources, wherein the one complex query does not identify any data source to query.

5. (Original) The system of claim 1, further comprising:

at least one complex query for data located in a plurality of data sources, the complex query calling a plurality of query function calls to query the plurality of data sources for the data, the complex query having a set of input parameters which define the data to be queried for, the set of input parameters consisting of at least one dimension instance, a query result and a description of the data to be queried.

6 (Original) The system of claim 5 wherein the description of the data to be queried is an exact_request_for_information.

7 - 23. (Canceled)

24. (New) An apparatus for unifying a plurality of data sources storing data related to an industry, each of the plurality of data sources being a data source instance of a data source type, the apparatus including:

a first plurality of nodes storing information defining a corresponding plurality of business context dimensions for the industry, the first plurality of nodes being interconnected in a manner that represents relationships between the corresponding business context dimensions;

a second plurality of nodes storing information relating data stored within the plurality of data sources to at least a portion of the plurality of business context dimensions for at least one of i) each data source type represented within the plurality of data sources and ii) each data source instance represented within the plurality of data sources, the second plurality of nodes mapped to the first plurality of nodes based on corresponding business context dimensions, each node of the second plurality of nodes storing information defining at least one business context dimension instance from the plurality of data sources, each business context dimension instance relating to an instance of stored data within the corresponding data source instance associated with the corresponding business context dimension; and

a first logic element in operative communication with the first and second pluralities of nodes to selectively request desired information from the plurality of data sources based at least in part on selection of one or more of the plurality of business context dimensions defined by the first plurality of nodes, wherein the first logic element identifies data source instances and business context dimension instances associated with the at least one selected business context dimension based at least in part on information stored in the first and second pluralities of nodes, wherein the first logic element is in operative communication with the plurality of data sources to selectively submit a query to each identified data source instance for the desired information and receive a result in response to the query.

25. (New) The apparatus of claim 24 wherein the access to data originating from the plurality of data sources is subject to user-specific access rights associated with at least one of data source types, data source instances, business context dimensions, and business context dimension instances.

26. (New) The apparatus of claim 24 wherein at least the second plurality of nodes is contained in a database.

27. (New) The apparatus of claim 26 wherein each node of the second plurality of nodes includes a table.

28. (New) The apparatus of claim 27 wherein each business context dimension instance has a unique identification within the table of the corresponding node of the second plurality of nodes.

29. (New) The apparatus of claim 24 wherein the plurality of data sources includes first and second data source instances of a first data source type, each of the first and second data source instances storing an instance of data representing a first business context dimension.

30. (New) The apparatus of claim 29 wherein information defining each business context dimension instance within the plurality of data sources is stored in the corresponding node of the first plurality of nodes defining the corresponding business context dimension, the first plurality of nodes including a first business context node storing information defining the first business context dimension, first business context dimension instance, and second business context dimension instance.

31. (New) The apparatus of claim 29 wherein the second plurality of nodes includes a first data source node storing information relating data stored within at least one data source of the first data source type to the first business context dimension, the first data source node also storing information defining the first business context dimension instance and second business context dimension instance.

32. (New) The apparatus of claim 29 wherein the second plurality of nodes includes a first data source node storing information relating data stored within the first data source instance to the first business context dimension and a second data source node storing information relating data stored within the second data source instance to the first business context dimension, the first data source node also storing information defining the first business context dimension instance, and the second data source node also storing information defining the second business context dimension instance.

33. (New) The apparatus of claim 29 wherein the first business context dimension is selected in conjunction with a first request for desired information by the first logic element, the first logic element submitting a first query to at least the first and second data source instances.

34. (New) The apparatus of claim 24 wherein the plurality of data sources includes a first data source instance of a first data source type and a second data source instance of a second data source type, each of the first and second data source instances storing an instance of data representing a first business context dimension.

35. (New) The apparatus of claim 34 wherein information defining each business context dimension instance within the plurality of data sources is stored in the corresponding node of the first plurality of nodes defining the corresponding business context dimension, the first plurality of nodes including a first business context node storing information defining the first business context dimension, first business context dimension instance, and second business context dimension instance.

36. (New) The apparatus of claim 34 wherein the second plurality of nodes includes a first data source node storing information relating data stored within at least one data source of the first data source type to the first business context dimension and a second data source node storing information relating data stored within at least one data source of the second data source type to the first business context dimension, the first data source node also storing information defining the first business context dimension instance, and the second data source node also storing information defining the second business context dimension instance.

37. (New) The apparatus of claim 34 wherein the second plurality of nodes includes a first data source node storing information relating data stored within the first data source instance to the first business context dimension and a second data source node storing information relating data stored within the second data source instance to the first business context dimension, the first data source node also storing information defining the first business context dimension instance, and the second data source node also storing information defining the second business context dimension instance.

38. (New) The apparatus of claim 34 wherein the first business context dimension is selected in conjunction with a first request for desired information by the first logic element, the first

logic element submitting a first query to at least the first data source instance and a second query to at least the second data source instance.

39. (New) The apparatus of claim 24 wherein the first logic element includes a user interface adapted to permit a user to perform at least one of selecting at least one business context dimension, selecting the desired information, and submitting the query.

40. (New) The apparatus of claim 24, further including:
a second logic element defining the plurality of business concept dimensions based at least in part on reviewing the plurality of data sources and determining logical groupings of the data stored therein, wherein the second logic element generates the first plurality of nodes based at least in part on the defined plurality of business concept dimensions.

41. (New) The apparatus of claim 24, further including:
a second logic element generating the second plurality of nodes based at least in part on one or more of i) analyzing internal data structures of one or more of the plurality of data sources, ii) analyzing the data stored within one or more of the plurality of data sources, iii) determining business contexts of data stored within one or more of the plurality of data sources, and iv) determining logical groupings of data stored within one or more of the plurality of data sources in relation to the plurality of business concept dimensions.

42. (New) The apparatus of claim 24, further including:
a second logic element in communication with the first logic element to store at least one query submitted by the first logic element for use in a subsequent request for the corresponding desired information.

43. (New) The apparatus of claim 24, further including:
a second logic element in communication with the first logic element to store at least one result received by the first logic element in response to a corresponding query for use in conjunction with a subsequent request for the corresponding desired information.

44. (New) An apparatus for unifying data related to an industry, including:

a plurality of data sources storing data related to the industry, each of the plurality of data sources being a data source instance of a data source type;

a first plurality of nodes storing information defining a corresponding plurality of business context dimensions for the industry, the first plurality of nodes being interconnected in a manner that represents relationships between the corresponding business context dimensions;

a second plurality of nodes storing information relating data stored within the plurality of data sources to at least a portion of the plurality of business context dimensions for at least one of i) each data source type represented within the plurality of data sources and ii) each data source instance represented within the plurality of data sources, the second plurality of nodes mapped to the first plurality of nodes based on corresponding business context dimensions, each node of the second plurality of nodes storing information defining at least one business context dimension instance from the plurality of data sources, each business context dimension instance relating to an instance of stored data within the corresponding data source instance associated with the corresponding business context dimension; and

a first logic element in operative communication with the first and second pluralities of nodes to selectively request desired information from the plurality of data sources based at least in part on selection of one or more of the plurality of business context dimensions defined by the first plurality of nodes, wherein the first logic element identifies data source instances and business context dimension instances associated with the at least one selected business context dimension based at least in part on information stored in the first and second pluralities of nodes, wherein the first logic element is in operative communication with the plurality of data sources to selectively submit a query to each identified data source instance of the desired information and receive a result in response to the query.

45. (New) The apparatus of claim 44 wherein the access to data originating from the plurality of data sources is subject to user-specific access rights associated with at least one of data source types, data source instances, business context dimensions, and business context dimension instances.

46. (New) The apparatus of claim 44, the first logic element including:

a user interface adapted to permit a user to perform at least one of selecting at least one business context dimension, selecting the desired information, and submitting the query, the apparatus .

47. (New) The apparatus of claim 44, further including:

a second logic element defining the plurality of business concept dimensions based at least in part on reviewing the plurality of data sources and determining logical groupings of the data stored therein, wherein the second logic element generates the first plurality of nodes based at least in part on the defined plurality of business concept dimensions.

48. (New) The apparatus of claim 44, further including:

a second logic element generating the second plurality of nodes based at least in part on one or more of i) analyzing internal data structures of one or more of the plurality of data sources, ii) analyzing the data stored within one or more of the plurality of data sources, iii) determining business contexts of data stored within one or more of the plurality of data sources, and iv) determining logical groupings of data stored within one or more of the plurality of data sources in relation to the plurality of business concept dimensions.

49. (New) A method for unifying a plurality of data sources storing data related to an industry, each of the plurality of data sources being a data source instance of a data source type, the method including:

a) storing information in a first plurality of nodes that defines a corresponding plurality of business context dimensions for the industry and interconnecting the first plurality of nodes in a manner that represents relationships between the corresponding business context dimensions;

b) storing information in a second plurality of nodes that indicates data stored within the plurality of data sources corresponds to at least a portion of the plurality of business context dimensions for at least one of i) each data source type represented within the plurality of data sources or ii) each data source instance represented within the plurality of data sources, and mapping the second plurality of nodes to the first plurality of nodes based on corresponding business context dimensions;

c) storing information in each node of the second plurality of nodes that defines at least one business context dimension instance from the plurality of data sources, each business context dimension instance relating to an instance of stored data within the corresponding data source instance associated with the corresponding business context dimension;

d) initiating a request for desired information from the plurality of data sources based at least in part on selection of one or more of the plurality of business context dimensions defined by the first plurality of nodes; and

e) identifying data source instances and business context dimension instances associated with the at least one selected business context dimension based at least in part on information stored in the first and second pluralities of nodes.

50. (New) The method of claim 49, further including:

f) submitting a query to each identified data source instance for the desired information.

51. (New) The method of claim 50, further including:

g) storing at least one query submitted in f) for use in a subsequent request for the corresponding desired information in lieu of repeating d) and e).

52. (New) The method of claim 50, further including:

g) receiving a result from at least one data source instance in response to the query.

53. (New) The method of claim 52, further including:

h) storing at least one result received in g) for use in conjunction with a subsequent request for the corresponding desired information in lieu of repeating g).

54. (New) The method of claim 52 wherein at least one of the initiating in d), identifying in e), submitting in f), and receiving in g) is subject to user-specific access rights associated with at least one of data source types, data source instances, business context dimensions, and business context dimension instances in conjunction with access to data originating from the plurality of data sources.

55. (New) The method of claim 49 wherein the plurality of data sources includes first and second data source instances of a first data source type and each of the first and second data source instances store an instance of data representing a first business context dimension.

56. (New) The method of claim 55, further including:

f) storing information defining each business context dimension instance within the plurality of data sources in the corresponding node of the first plurality of nodes that defines the corresponding business context dimension, including storing information defining the first business context dimension, first business context dimension instance, and second business context dimension instance in a first business context node of the first plurality of nodes.

57. (New) The method of claim 55, in conjunction with the storing in b), the method further including:

f) storing information in a first data source node of the second plurality of nodes that indicates data stored within at least one data source of the first data source type corresponds to the first business context dimension; and

g) storing information in the first data source node that defines the first business context dimension instance and second business context dimension instance.

58. (New) The method of claim 55, in conjunction with the storing in b), the method further including:

f) storing information in a first data source node of the second plurality of nodes that indicates data stored within the first data source instance corresponds to the first business context dimension;

g) storing information in a second data source node of the second plurality of nodes that indicates data stored within the second data source instance corresponds to the first business context dimension;

h) storing information in the first data source node that defines the first business context dimension instance; and

i) storing information in the second data source node that defines the second business context dimension instance.

59. (New) The method of claim 55, further including:

f) in conjunction with the initiating in d), initiating a first request for desired information from the plurality of data sources based at least in part on selection of the first business context dimension; and

g) submitting a first query to at least the first and second data source instances for the desired information.

60. (New) The method of claim 49 wherein the plurality of data sources includes a first data source instance of a first data source type and a second data source instance of a second data source type, each of the first and second data source instances storing an instance of data representing a first business context dimension.

61. (New) The method of claim 60, further including:

f) storing information defining each business context dimension instance within the plurality of data sources in the corresponding node of the first plurality of nodes that defines the corresponding business context dimension, including storing information defining the first business context dimension, first business context dimension instance, and second business context dimension instance in a first business context node of the first plurality of nodes.

62. (New) The method of claim 60, in conjunction with the storing in b), the method further including:

f) storing information in a first data source node of the second plurality of nodes that indicates data stored within at least one data source of the first data source type corresponds to the first business context dimension;

g) storing information in a second data source node of the second plurality of nodes that indicates data stored within at least one data source of the second data source type corresponds to the first business context dimension;

h) storing information in the first data source node that defines the first business context dimension instance; and

i) storing information in the second data source node that defines the second business context dimension instance.

63. (New) The method of claim 60, in conjunction with the storing in b), the method further including:

f) storing information in a first data source node of the second plurality of nodes that indicates data stored within the first data source instance corresponds to the first business context dimension;

g) storing information in a second data source node of the second plurality of nodes that indicates data stored within the second data source instance corresponds to the first business context dimension;

h) storing information in the first data source node that defines the first business context dimension instance; and

i) storing information in the second data source node that defines the second business context dimension instance.

64. (New) The method of claim 60, further including:

f) in conjunction with the initiating in d), initiating a first request for desired information from the plurality of data sources based at least in part on selection of the first business context dimension; and

g) submitting a first query to at least the first data source instance and a second query to at least the second data source instance for the desired information.

65. (New) The method of claim 49 wherein the initiating in d) is also based at least in part on selection of at least one data source type or at least one data source instance from which to request the desired information.

66. (New) The method of claim 49, further including:

f) defining the plurality of business concept dimensions based at least in part on reviewing the plurality of data sources and determining logical groupings of the data stored therein;

g) generating the first plurality of nodes based at least in part on the defined plurality of business concept dimensions; and

h) generating the second plurality of nodes based at least in part on one or more of i) analyzing internal data structures of one or more of the plurality of data sources, ii) analyzing the data stored within one or more of the plurality of data sources, iii) determining business contexts of data stored within one or more of the plurality of data sources, and iv) determining logical groupings of data stored within one or more of the plurality of data sources in relation to the plurality of business concept dimensions.

67. (New) A method for unifying data related to an industry, including:

a) identifying a plurality of data sources storing data related to the industry, each of the plurality of data sources being a data source instance of a data source type;

b) storing information in a first plurality of nodes that defines a corresponding plurality of business context dimensions for the industry and interconnecting the first plurality of nodes in a manner that represents relationships between the corresponding business context dimensions;

c) storing information in a second plurality of nodes that indicates data stored within the plurality of data sources corresponds to at least a portion of the plurality of business context dimensions for at least one of i) each data source type represented within the plurality of data sources or ii) each data source instance represented within the plurality of data sources, and mapping the second plurality of nodes to the first plurality of nodes based on corresponding business context dimensions;

d) storing information in each node of the second plurality of nodes that defines at least one business context dimension instance from the plurality of data sources, each business context dimension instance relating to an instance of stored data within the corresponding data source instance associated with the corresponding business context dimension;

e) initiating a request for desired information from the plurality of data sources based at least in part on selection of one or more of the plurality of business context dimensions defined by the first plurality of nodes;

f) identifying data source instances and business context dimension instances associated with the at least one selected business context dimension based at least in part on information stored in the first and second pluralities of nodes;

- g) submitting a query to each identified data source instance for the desired information;
- h) storing at least one query submitted in g) for use in a subsequent request for the corresponding desired information in lieu of repeating e) and f);
- i) receiving a result from at least one data source instance in response to the query;
- j) storing at least one result received in i) for use in conjunction with a subsequent request for the corresponding desired information in lieu of repeating g).

68. (New) The method of claim 67 wherein at least one of the initiating in e), identifying in f), submitting in g), and receiving in i) is subject to user-specific access rights associated with at least one of data source types, data source instances, business context dimensions, and business context dimension instances in conjunction with access to data originating from the plurality of data sources.

69. (New) The method of claim 67, further including:

- k) storing information defining each business context dimension instance within the plurality of data sources in the corresponding node of the first plurality of nodes that defines the corresponding business context dimension.

70. (New) The method of claim 67, further including:

- k) defining the plurality of business concept dimensions based at least in part on reviewing the plurality of data sources and determining logical groupings of the data stored therein;
- l) generating the first plurality of nodes based at least in part on the defined plurality of business concept dimensions; and
- m) generating the second plurality of nodes based at least in part on one or more of i) analyzing internal data structures of one or more of the plurality of data sources, ii) analyzing the data stored within one or more of the plurality of data sources, iii) determining business contexts of data stored within one or more of the plurality of data sources, and iv) determining logical groupings of data stored within one or more of the plurality of data sources in relation to the plurality of business concept dimensions.